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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/501,045	02/09/2000	Glenn T. Colon-Bonet	10971158-1	3338

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EXAMINER

DO, CHAT C

ART UNIT	PAPER NUMBER
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2124

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/501,045

Applicant(s)

COLON-BONET, GLENN T.

Examiner

Chat C. Do

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,7,8 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 7-8, and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This communication is responsive to Amendment filed 05/05/2004.
2. Claims 1-2, 7-8, and 10 are pending in the application. Claims 1 and 7 are independent claims. In Amendment, claims 1 and 7 are amended. This action is made non-final after a Request for Continued Examination filed.
3. Claims 3-6, 9, and 11-22 are cancelled without prejudice, waiver, or disclaimer.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-2, 7-8, and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The original specification fails to disclose "a modified carry-save adder configured to receive the third propagate, kill, and generate recoded number representation from the first carry-save adder, the carry-out bit, and the carry-in bit from the circuitry, add the separate propagate, kill, and generate bits of the third propagate, kill, and generate recoded number representation with the carry-out bit, and the carry-in

bit to generate a sum value and a carry value" as cited in the amended claims because the modified carry-save adder (Fig. 6 part 100) neither receives the carry-out bit nor adds the third PKG with the carry-out bit as seen in Figure 6 of present application. Instead the carry-out bit is processed by the first carry-save adder (Fig. 6 part 120) and outputs directly as carry-out bit (Fig. 6 part 127). The specification discloses in Figure 6 and in lines 20-25 page 9 the modified carry-save adder only adds the third PKG and the carry-in bit; but fails to disclose the structure and method of the modified carry-save adder that adds **the carry-out bit** as cited in amended claims with the third PKG and the carry-in bit.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-2, 7-8, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Bradley (U.S. 6,496,846).

Re claim 1, Bradley discloses in Figure 1 an apparatus for performing the addition of a propagate, kill, and generate recoded numbers (abstract) apparatus comprising: a circuitry (Figure 1) configured to receive at least a first operand (e.g. A[1] and B[1] in

dual rail encoded values input into 103 and 105) and a second operand (e.g. A[2] and B[2] in dual rail encoded values input into 103 and 105), and a carry-in bit (Carry-in as CINL and CINH e.g. for block 102 the carry-in is CINH and CINL; for block 101 the carry-in is output of PKG0), the first and second operands comprising respective first and second propagate, kill, and generate recoded number representations of respective first and second binary operands (output of 106-1 wherein PKG is representation of recoded values of first and second operands; e.g. PKG1 and PKG2...); a first carry-save adder (107-1, 108-1, and 109-1 are component of the adder) configured to add first operand and second operand (e.g. PKG1 and PKG2) to generate a third propagate, kill, and generate recoded number representation (PinKinGin of the adder according to equations in col. 4 lines 43-47) and a carry-out bit (PKG0 is carry-out bit as respect to the present block and is carry-in bit as respect to the next block) ; and a modified carry-save adder (106) configured to receive the third propagate, kill, and generate recoded number representation (PinKinGin from the 107-1, 108-1, 109-1) from the first carry-save adder (107-1, 108-1, 109-1), the carry-out bit, and the carry-in bit (CINH and CINL) from the circuitry, add (description of block 106 is SUM as ADD) the separate propagate, kill, and generate bits of the third propagate, kill, and generate recoded number representation (PinKinGin from 107-1, 108-1, 109-1) with the carry-out bit and the carry-in bit (CINH and CINL) to generate a sum value (SUML and SUMH as output of 106) and a carry value (output of PKGX from the top level).

Re claim 2, Bradley further discloses in Figure 1 sum value and carry value are dual rail encoded values (SUML and SUMH).

Re claims 7-8, they are method claims of claim 1. Thus, claims 7-8 are also rejected under same rationale as cited in the rejection of rejected claim 1.

Re claim 10, it is method claim of claim 2. Thus, claim 10 is also rejected under same rationale as cited in the rejection of rejected claim 2.

Response to Arguments

8. Applicant's arguments filed 05/05/2004 have been fully considered but they are not persuasive.

a. The applicant argues in page 9 1st paragraph that Bradley does not disclose, teach, or suggest that operands A and B are propagate, kill, generate recoded numbers.

The examiner respectfully submits that Bradley clearly discloses in Figure 1 that encoder 8 encodes the dual rail A and B into PKG representation 106-1.

b. The applicant argues in page 9 3rd paragraph that Bradley fails to disclose a carry-out bit as cited in the claim.

The examiner respectfully submits that the block 105 with label PKG0 in Bradley Figure 1 clearly disclose a carry-out bit as an carry-in bit (CINH and CINL) into the next block. The last block in the operation (e.g. 103) will have the last carry-out bit from PKG1 label.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chat C. Do whose telephone number is (703) 305-5655. The examiner can normally be reached on M => F from 7:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chaki Kakali can be reached on (703) 305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chat C. Do
Examiner
Art Unit 2124

June 11, 2004

Chaki Kakali

**KAKALI CHAKI
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